AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method on a communication receiver having a soft bit generator and a turbo decoder, the method for computing a threshold Sth_i used in demodulating a quadrature amplitude modulated (QAM) signal received by the communication receiver to generate a plurality of soft bits per received symbol for input to [[a]] the turbo decoder, the method including the steps of:

the soft bit generator:

computing ~~the~~ a mean amplitude A of the received symbols; ~~and~~

multiplying the mean amplitude A by a constant C_i for a square QAM constellation with 4^m points, such that

$$Sth_i = A \times C_i$$

where m is a positive integer and I is a positive integer from 1 to $\left(\sqrt{4^{m-1}}\right)-1$;

computing one or more of the soft bits from the threshold Sth_i; and

outputting the computed soft bits to the turbo decoder.

2. (Original) A method according to claim 1, wherein the mean amplitude A is computed from a block of K received symbols, where K is a positive integer.

3. (Original) A method according to either one of claims 1 or 2, wherein the value of K is inversely proportional to the speed of change in channel conditions.

4. (Currently Amended) A method according to ~~any~~ either one of ~~the preceding~~ claims 1 or 2, wherein the constant C_i is computed according to

$$C_i = 2 \times I \times \Delta$$

where Δ is a normalising parameter for a square QAM constellation with 4^m points.

5. (Original) A method according to claim 4, wherein the QAM signal is a 16QAM signal and the constant C_i equals $\frac{2}{\sqrt{10}}$.

6. (Original) A method according to claim 4, wherein the QAM signal is a 16QAM signal and the constant Ci equals 0.5.

7. (Currently Amended) A method according to ~~any one of the preceding claims~~ claim 1, wherein the mean amplitude A of the received symbols is computed according to

$$A = \max(AI, AQ) + 0.5 \min(AI, AQ)$$

where AI and AQ are respectively the averages of orthogonal I and Q components of each received symbol.

8. (Currently Amended) A method according to ~~any~~ either one of claims 1 ~~to 6~~ or 2, wherein the mean amplitude A of the received symbols is computed according to

$$A = AI + AQ$$

where AI and AQ are respectively the averages of orthogonal I and Q components of each received symbol.

9. (Cancelled).

10. (Currently Amended) A method according to claim [[9]] 1, wherein log2 4m soft bits are computed from the threshold Sth_i.

11. (Currently Amended) A device within a communication receiver for computing a threshold Sth_i used in demodulating a quadrature amplitude modulated (QAM) signal received by

the communication receiver to generate a plurality of soft bits per received symbol for input to a turbo decoder, the device including:

means for computing ~~the~~ a mean amplitude A of the received symbols and multiplying the mean amplitude A by of the received symbols and multiplying the mean amplitude A by a constant C_i for a square QAM constellation with 4^m points, such that

$$Sth_i = A \times C_i$$

where m is a positive integer and i is a positive integer from 1 to $\left(\sqrt{4^{m-1}}\right)-1$;

means for computing one or more of the soft bits from the threshold Sth_i; and

means for outputting the computed soft bits to the turbo decoder.

12. (Currently Amended) A device within a communication receiver for generating soft bits per received symbol for input to a turbo decoder used in demodulating a quadrature amplitude modulated (QAM) signal received by the communication receiver, the device including:

means for computing ~~the~~ a mean amplitude A of the received symbols and multiplying the mean amplitude A by a constant C_i for a square QAM constellation with 4^m points, such that

$$Sth_i = A \times C_i$$

where m is a positive integer and i is a positive integer from 1 to $\left(\sqrt{4^{m-1}}\right)-1$; ~~and~~

means for computing one or more of the soft bits from the threshold Sth_i; and

means for outputting the computed soft bits to the turbo decoder.

13. (Cancelled).